

ABSTRACT OF THE DISCLOSURE

In a hetero bipolar transistor according to the present invention, a SiGe spacer layer (40), a SiGe graded layer (41) having a portion functioning
5 as a base layer and composed of a plurality of sublayers having different Ge composition ratios, and a Si cap layer (42) are formed on a collector layer (12) formed in a portion of a Si substrate (10). In the SiGe graded layer (41), when the thickness of each sublayer is larger, the number of sublayers is smaller, and difference in Ge composition ratio between adjacent sublayers is
10 larger, measurement of the thickness of each sublayer becomes easier. However, in order to avoid degradation of a cut-off frequency characteristic of a device, the film thickness of each sublayer needs to be approximately 20 nm or less, and the number of sublayers is preferably 2 or more.

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